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ABSTRACT

During the last 10-15 years, there has been a burgeoning interest in ethnicity as a variable in research on objective personality assessment, particularly with respect to black-white differences. Racial differences in responses to items on the California Psychological Inventory (CPI) were investigated to identify nonpathological differences between blacks and whites. Black and white men and women (N=748) completed the CPI. On the average, there were significant differences for 34% of the items in each of the 18 scales. Current data indicate that blacks may be more cynical, less anxious, and more compulsive than whites. The other factors extend at the dimensionability of black-white differences, with the lower degree of social extraversion among blacks perhaps being the more important. Indications are that some scales of the CPI are more subject to the influence of ethnicity than others, with somewhat greater effects present for females. New item sets for measuring blacks should be developed as well as separate norms for various ethnic groups. (Author/KMF)

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Black-White Differences in Responses to California Psychological Inventory Items

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Black-White Differences in Responses to California Psychological Inventory Items

During the last ten to fifteen years there has been a burgeoning of interest in ethnicity as a variable in research on objective personality assessment--particularly with respect to Black-White differences. For example Costello, Fine and Blau (1973) and Davis (1975) have examined racial differences on the MMPI and, more recently, Cross, Barclay and Burger (1978) and Burger and Cross (1979) have studied differences between the CPI scores of Blacks and Whites. While such studies are instructive, it has been pointed out (Gynther, 1972) that significant racial differences on personality scales admit to a variety of explanations. A key component in narrowing down the possible explanations is the examination of item differences (as opposed to scale differences) as a function of ethnicity (Jones, 1978). Analysis of such differences in item responding could, potentially, point to specific dimensions along which Blacks differ from Whites.

The purpose of this study was to investigate racial differences in responses to the items of the California Psychological Inventory (Gough, 1969). Since the CPI was designed to measure normal (as opposed to abnormal) aspects of personality, analysis of racial differences in the CPI item pool holds the potential of clarifying the dimensions of nonpathological differences between Blacks and Whites. As no study, to date, has assessed the entire CPI item pool for racial differences, it would also be valuable to specify the particular items which evidence such differences. This information would detail the effect of ethnicity on the items of individual scales and, perhaps, refine interpretations based on the CPI when it is

used as an assessment device.

Method

Subjects were 218 Black females, 213 White females, 136 Black males and 181 White males who were freshman or sophomores at two community colleges in the St. Louis area. The CPI was administered to groups of subjects in the classroom.

Results

Chi square tests for racial differences were run on each item for females and males separately. Tables 1 and 2 present those items which yielded significant Black-White differences at the .01 level or lower. There were virtually no differences (in terms of discriminating items) when these analyses were performed separately for each social class as defined by Schneider and Lysgaard (1953).

Approximately two thirds of the significant items for the males were also significant for the females. Considering the data in Table 1, about 74% of the items involved were answered true more frequently by Blacks than Whites. Blacks responded in the "keyed" direction (over the 18 CPI scales) for 23% of the items. On the average, 34% of the items in each of the 18 scales showed significant differences. The scales showing markedly higher rates than this average were To (69%) and Ai (47%) scales showing markedly lower rates were Sy (17%) and Ac (18%). Whites scored higher in the "keyed" direction in excess of 61% of the scale items for all scales except Do, Sc, and Gi.

Considering the data for the males in Table 2, about 62% of the items showing significant differences were answered true more frequently by Blacks and Whites. Blacks, over the 18 CPI scales, responded in the keyed direction 43% of the time. An average of 22% of the items of each scale

showed significant racial differences. Scales deviating markedly from this average were Cm (4%), Gi (30%) and Fx (32%). Blacks scored in the keyed direction in excess of 60% of the items for the scales Cs, Sp, Wb, To, Ac, and Fe. Whites scored in the keyed direction in excess of 60% of the items for the scales Re, Sc, Gi, Cm, Ai, Ie, Py, Fx.

The items contained in Tables 1 and 2 respectively were subjected to separate factor analyses. Principle factors (utilizing iterated communality estimates) were extracted and rotated utilizing both varimax and promax procedures. Scree tests were used to determine the number of factors. Since the varimax and promax solutions were virtually identical, the varimax was chosen for interpretation. The major items defining the rotated factors for females and males are presented in Table 3 and 4 respectively.

Factor 1 for the females is defined by a number of items from the Wb (9), To (10) and Ie (8) scales. These are scales that have traditionally loaded on the personal adjustment factor--the largest factor--of the CPI. The items describe a number of neurotic fears, somatic complaints, and a pessimistic outlook on life. This factor was named Personal Adjustment. Factor 2 consists of items describing egotistical thrill seeking and attention getting attitudes and behaviors and was labelled Social Extraversion. Low scores are in the direction of greater social extraversion. Factor 3 is defined by a number of items (7) from the Do scale. Many of them describe apprehension about performance in social situations. This factor was labelled Social Anxiety. The fourth factor reflects a compulsive orderliness towards life, and a strong need to conform to social expectations. This factor has been labelled Compulsive Conformity. Low scores on this factor indicate the presence of compulsivity. Factor 5 has eight items

from the Re scale with high loadings on it. Many of the items with high loadings in this factor refer to politics, government, taxes, world affairs, particularly along a moralistic dimension. This factor was labelled Social Moralism. Factor 6 was clearly a water phobia factor. Factor 7 is characterized by items reflecting a cynical and suspicious attitude toward others and was labelled Cynicism. Low scores reflect a high degree of cynicism. Factor 8 is defined by items referring to political opinions and appraised success of self as a political leader. It was labelled Political Interest, and low scores indicate the presence of political interest. The last factor is a measure of Personal Happiness vs Excitation (presumably upsetting).

Looking at the results for the males (Table 4), Factor 1 is defined by a number of items from the To (7) and Wb (5) scales. The items with major loadings reflect a generally cynical and pessimistic outlook on life and is similar to the Cynicism factor found in the female data. Low scores indicate more cynicism. Factor 2 has some resemblance to the Social Extraversion factor found in the female's data. Low scores indicate higher degrees of extraversion. The third factor is a Social Anxiety dimension. The next factor could be described as a Mechanical Interest factor with low scores indicating higher degrees of mechanical interest. Factor 5 indicates a compulsive, rigid and moralistic outlook on life, with lower scores indicating greater rigidity. The next factor involves items reflecting thrill seeking vs more conventional life styles. Factor 7 is a fear of water factor identical to that found in the female's data. The final factor has some similarity to Factor 2 and Factor 6, and involves social extraversion with some aspects of thrill seeking.

Factor scores were calculated separately for the male and female samples,

and t-tests between Blacks and Whites within each sample were performed. All comparisons were significant at the .05 level or better. Relative to Whites, Black males and females describe themselves as less socially extraverted, experiencing less social anxiety, being more cynical, and more afraid of water. The White females (relative to the Black females) report themselves as more adjusted, less compulsive, more socially moralistic, less politically interested and experiencing more personal happiness. Black males (relative to White males) portray themselves as having more mechanical interests, more rigid, more conventional, and less thrill seeking.

Discussion

Jones (1978) examined Black-White differences in item responding in a junior college sample utilizing (among other items) about 45% of the CPI item pool. Considering items common to Jones' research and the present study about 64% of the significant discriminators in this study were reported to be significant by Jones (1978). This statistic compares favorably with the 61% cross validation rate reported by White (1975) in a study using the MMPI item pool in a college sample. It is not clear whether the agreement rate between this study and Jones (1978) would have been higher had he used the entire CPI item pool. Agreement data, of course, is influenced by a number of factors including differential Type II error rates and sampling variability.

There is a large degree of correspondence between some of the factors isolated in this study and those reported by Jones (1978) and Harrison and Kass (1967), who studied a sample of pregnant women drawn from a prenatal clinic. As suggested in the Harrison and Kass (1967) and Jones (1978) studies, the current data indicate Balcks to be more cynical, less anxious

and more compulsive than Whites. The other factors of this study extend at the dimensionabity of Black-White differences--with the lower degree of social extraversion among Blacks perhaps being the more important. The dimensions encompass broad areas of normal personality functioning and have, potentially, many ramifications. While one might argue about the nature of the observed differences (i.e., trait differences as a function of differing cultural backgrounds vs differential perceptions of item content), they will still have to be taken into account in a wide variety of circumstances. The authors are willing to concede, however that the "fear of water" factor may be an exception to the above statement.

The distribution of significant items over the eighteen CPI scales indicates some scales are more subject to the influence of ethnicity than others, with somewhat greater effects present for females. The possibility has been raised (with respect to the MMPI) that new item sets for measuring Blacks should be developed or that separate norms for various ethnic groups should be developed (Gynther, Lachar & Dahlstrom, 1978). While the present study does not speak directly to this point, it does suggest that these alternatives should be studied. In any case, scores obtained by Blacks on the CPI should be interpreted against the background of the results of this study.

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Table 1

CPI Items Differentiating* Between Black and White Females

T	F
3, 5, 6, 14, 15, 16, 20, 23, 24, 26,	1, 4, 8, 10, 11, 22, 35, 42, 58,
32, 41, 48, 49, 56, 57, 60, 63,	66, 71, 78, 100, 102, 105, 115,
64, 69, 73, 75, 79, 88, 89, 90, 92,	129, 133, 143, 148, 154, 192, 207,
94, 98, 104, 106, 112, 117, 128, 131,	229, 231, 245, 258, 259, 277, 278,
136, 139, 141, 142, 149, 151, 155,	303, 334, 342, 368, 389, 393, 410,
156, 158, 171, 176, 178, 181,	413, 432, 433, 443, 452
184, 190, 194, 202, 204, 206, 209,	
215, 217, 219, 220, 223, 225, 233,	
236, 237, 241, 256, 261, 265, 266,	
274, 282, 285, 286, 288, 292, 294,	
318, 320, 323, 324, 327, 333, 337,	
338, 341, 344, 347, 349, 355, 357,	
360, 361, 364, 378, 383, 384, 391,	
392, 397, 398, 402, 405, 406, 409,	
415, 416, 417, 421, 423, 430, 438,	
442, 448, 453	

Note. - An item appears in the T column if it was answered "True" more frequently by Blacks than Whites and in the F column if it is answered "False" more frequently by Blacks than Whites.

*Probability of chi-square $\leq$ .01

Table 2

CPI Items Differentiating* Between Black and White Males

T	F
14, 15, 24, 32, 41, 48, 63, 69, 79,	4, 7, 30, 39, 40, 42, 66, 78, 82,
86, 88, 92, 98, 112, 122, 128, 131,	100, 102, 105, 129, 133, 143, 147,
136, 140, 141, 149, 166, 176, 178,	148, 170, 175, 179, 192, 249, 251,
181, 182, 186, 190, 202, 204, 209,	259, 275, 277, 278, 291, 303, 306,
218, 219, 221, 222, 223, 225, 233,	315, 375, 389, 393, 396, 413, 432,
241, 266, 274, 286, 287, 288, 292,	443, 452
318, 347, 357, 360, 363, 364, 370,	
383, 387, 392, 394, 397, 398, 403	
424, 438, 451	

Note. - An item appears in the T column if it was answered "True" more frequently by Blacks than Whites and in the F column if it is answered "False" more frequently by Black than Whites.

*Probability of chi-square $\leq$ .01.

Table 3

CPI Items with Major Loadings on the Rotated Factors-Females

Factor No.	Factor Loading > .35	.35 > Factor Loading > .30
I (W)	15, 20, 89, 92, 136, 151, 158, 176, 178, 184, 206, 236, 245*, 294, 337, 398, 405, 416, 423, 432*, 438, 453	128, 194, 220, 225, 341, 402, 406, 430
II (B)	4, 42, 78, 102, 231, 347*	105, 143, 286*
III (W)	11*, 31*, 58*, 202, 258*, 292, 326, 448, 452*	6, 112, 192*, 355, 443*
IV (W)	24, 88, 155, 204, 223, 282, 361	6, 98, 131, 141, 174, 181, 256
V (W)	22*, 26, 117, 190, 223, 261, 278*, 360, 417	49, 75, 90, 139, 303*, 349
VI (B)	79*, 277	
VII (W)	48, 142, 178, 219, 241, 266, 342, 442,	128, 225
VIII (W)		171, 229, 355, 443*
IX (W)		71*, 156, 245*, 327, 378, 416

*Factor loading is negative

Note. - A (B) after the Factor No. indicates Blacks had higher factor scores than Whites. A (W) indicates Whites had higher factor scores than Blacks.

Table 4

CPI Items with Major Loadings on the Rotated Factors-Male

Factor No.	Item No. Factor Loading > .35	.35 > Factor Loading > .30
I (W)	32, 128, 136, 176, 178, 190. 209, 219, 223, 225, 233, 266, 398, 438	15, 92, 131, 360, 363, 364, 413*
II (B)	4, 30, 42, 78, 147	40, 102, 170
III (W)	7*, 122, 140, 186*, 202, 222, 443*, 452*	40*, 218, 403
IV (B)	82, 249, 291	129
V (W)	24, 88, 98, 112, 141, 166, 204, 222, 387, 451	69, 131, 140, 162, 221
VI (W)	278, 286	66*, 223, 275*, 347
VII (B)	79*, 277	
VIII (W)	39, 129, 143	102

*Factor loading is negative

Note. - A (B) after the Factor No. indicates Blacks had higher factor scores than Whites. A (W) indicates Whites had higher factor scores than Blacks.